NRCS
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Utah Water Supply Outlook Report

Feb, 2005

Water over the top of Lower Enterprise Dam, January 12, 2005. Photo by Robert Rasely, NRCS, USDA.

Water Supply Outlook Reports
and
Federal - State - Private
Cooperative Snow Surveys

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How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

STATE OF UTAH GENERAL OUTLOOK
Feb 1, 2005

SUMMARY
Water supply conditions are improving statewide, in southern Utah, quite dramatically and in the north, to a far lesser extent. Beginning with southern Utah and the Uintah Basin, snowpacks are on a record pace. Many sites are above 200% of average with some pushing 400%. The Uintah Basin, the Sevier, southwest Utah and the Escalante are all above their average April 1 snowpack with 2 months of accumulation remaining. The Sevier and southwest Utah have set new record high February 1 snowpacks and the Uintah Basin has tied the record. The potential for new record maximum snowpacks in these areas is substantial. With record snowpacks, comes the potential for very high snowmelt streamflow. For some streams like Coal Creek which has over 350% of average snowpack and is just an inch shy of the record maximum snowpack already, it is likely not if, but merely when the high flows will occur. While many outcomes remain possible in these areas, it is prudent to begin preparation for potentially high snowmelt streamflow this spring. In other Utah watersheds, snowpacks are still above average, but some only marginally so. The Bear River is the lowest at 109% with the Weber at 127% and the Provo at 141%. Given average accumulation for February and March, northern Utah will have snowpacks from 110% to 130% of average. Southern Utah and the Uintah Basin will have between 150% and 200% of average. Precipitation for January was much above average for statewide at 167%. Northern Utah ranged from 120% to 150% and southern Utah had 200% to 360% of average. This brings the seasonal precipitation, (Oct-Jan) to 157%. Soil moisture was substantially recharged from large precipitation events in late fall and early winter as well as the recent precipitation events. Current soil moisture across the entire state is only about 10% to 15% less than what it was during active snowmelt of last spring. Estimates of soil moisture range from about 50% to 75% of saturation in the upper 24 inches of soil. Low reservoir storage is also a concern with total reservoir storage at 42% of capacity, up 3% from last year. The area of greatest drought concern is the Bear River with current reservoir storage at only 2% of capacity. Areas that could have high streamflows include the Uintah Basin, southeast Utah, Escalante, upper Sevier and the Virgin. Streamflow forecasts range from 60% to 290% of average. Surface Water Supply Indices range from 4% on the Bear River, to 95% on the Virgin.

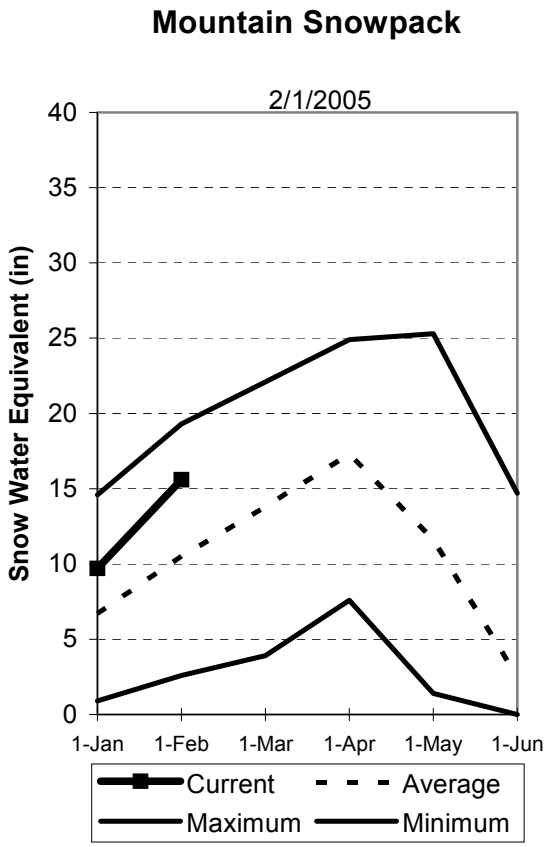
SNOWPACK
February first snowpacks as measured by the NRCS SNOTEL system range from 109% on the Bear to 247% in southwestern Utah. Most areas in northern Utah are 15% to 30% higher than last year, whereas the Uintah Basin and everything south of Salina have double and triple snowpacks the of last year. The Midway Valley SNOTEL site currently has 49.1 inches of snow water equivalent and its April 1 average peak is only 27 inches. Of some concern are low elevation snowpacks across the state, which are below average. The Uintah Basin, Upper Sevier and southwest Utah have already surpassed their April 1 snowpack average and could easily be in the 150% to 200% of average category by April 1. Any outcome is still possible in northern Utah, including continued drought conditions.

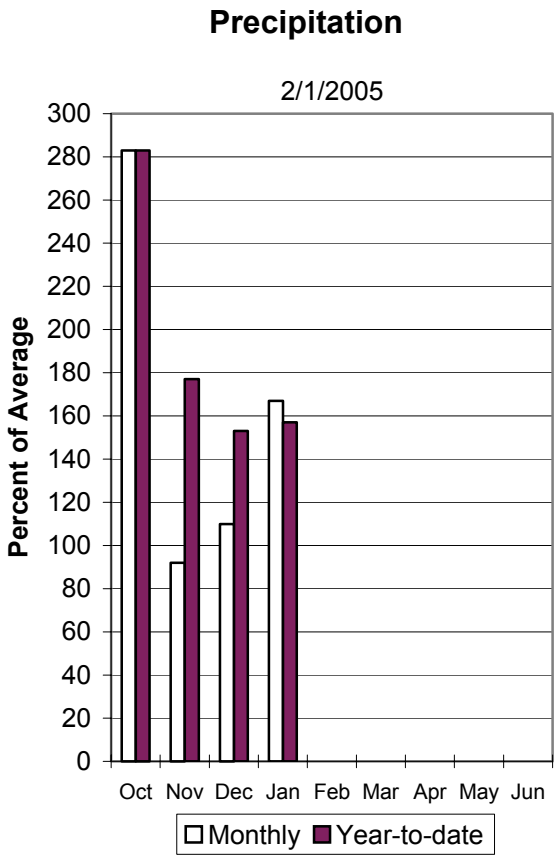
PRECIPITATION
Mountain precipitation during January was much above average over southern Utah and the Uintah Basin (200%-360%). In northhern Utah, precipitation was 115% to 150% of average. This brings the seasonal accumulation (Oct-Jan) to 157% of average statewide.

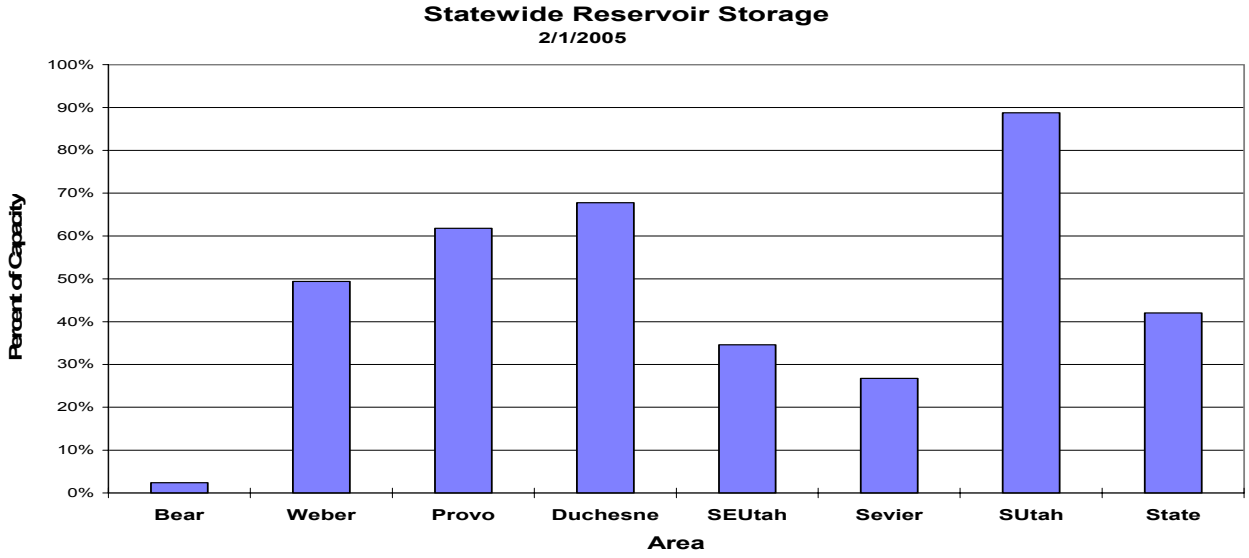
RESERVOIRS
Storage in 41 of Utah's key irrigation reservoirs is at 42% of capacity. This is an increase of 3% from last year and reflects heavy use of reservoir storage to make up the streamflow deficit during years of drought. Most reservoir operators are utilizing a conservative strategy, storing as much water as possible.

STREAMFLOW

Snowmelt streamflows are expected to be below average to well above average across the state of Utah this year. Forecast streamflows range from 58% on the Bear at Stewart dam to 290% on Coal Creek near Cedar City. Most flows are forecast to be in the 100% to 160% range. Overall water supply conditions are improving.

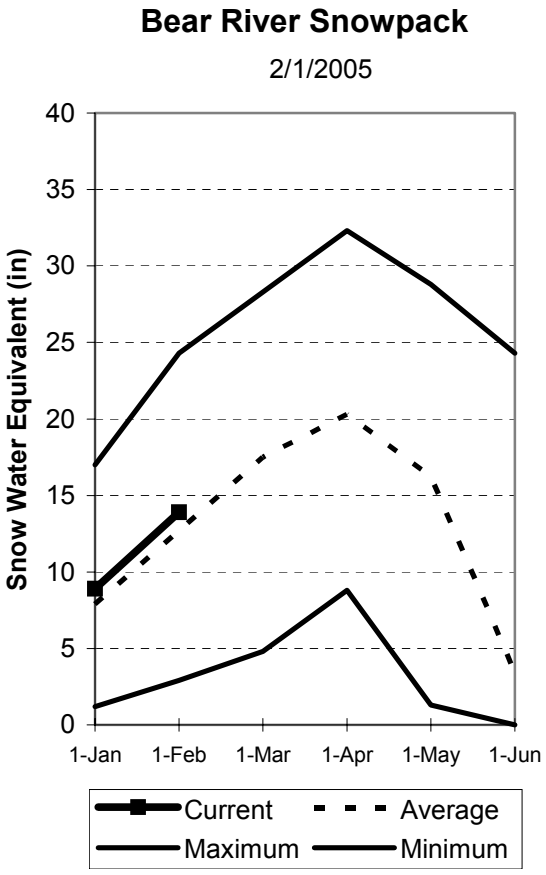


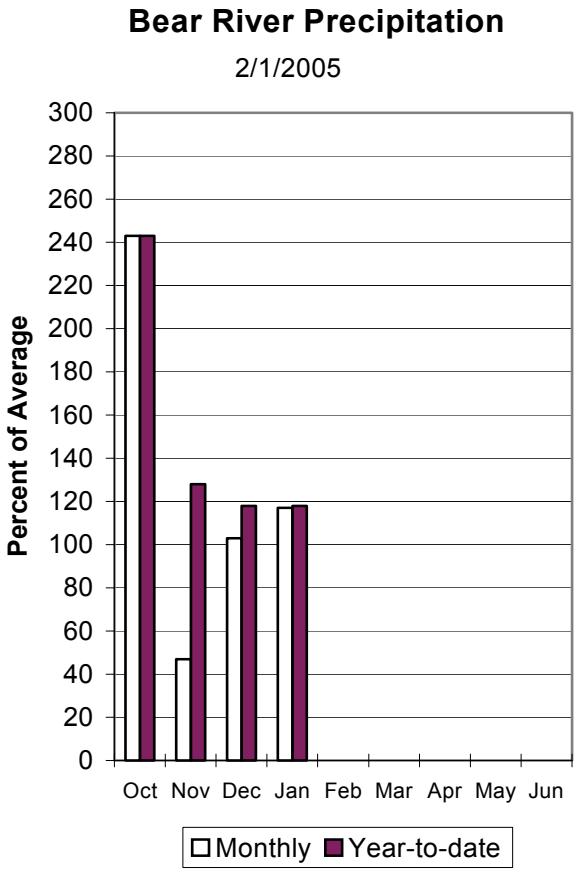


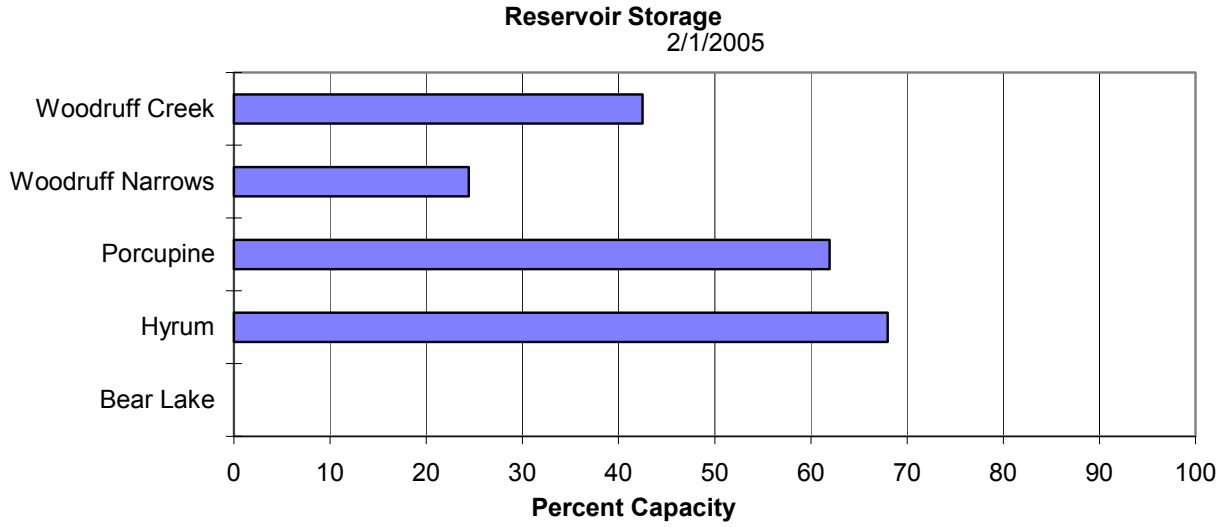


Bear River Basin
Feb 1, 2005

Snowpacks on the Bear River Basin are slightly above average at 109% of normal, about 116% of last year and 3% less than last month. Specific sites range from 79% to 131% of normal. January precipitation was a little above average at 117%, which brings the seasonal accumulation (Oct-Jan) to 118% of average. Soil moisture levels in runoff producing areas are at 67% of saturation in the upper 2 feet of soil compared to 33% last year and up 3% from last month. Forecast streamflows range from much below to near average (58%-115%) volumes this spring. Reservoir storage is extremely low at 2% of capacity, the same as last year. The Surface Water Supply Index is at 4% for the Bear River, or 96% of years have had more total water available. Water supply conditions are much below normal due to low reservoir storage..







BEAR RIVER BASIN
Streamflow Forecasts - February 1, 2005

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Bear River nr UT-WY State Line	APR-JUL	96	116	130	115	144	164	113
Bear River ab Reservoir nr Woodruff	APR-JUL	91	123	145	107	167	200	136
Big Creek nr Randolph	APR-JUL	2.70	3.80	4.60	94	5.40	6.50	4.90
Smiths Fork nr Border	APR-JUL	65	83	95	92	107	125	103
Bear River at Stewart Dam	APR-JUL	69	105	135	58	168	224	234
Little Bear River at Paradise	APR-JUL	25	36	45	98	55	70	46
Logan River nr Logan combined flow	APR-JUL	81	105	122	97	141	171	126
Blacksmith Fork nr Hyrum	APR-JUL	29	41	50	104	60	76	48

BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1302.0	0.0	21.1	---
HYRUM	15.3	10.4	9.2	10.4
PORCUPINE	11.3	7.0	6.0	4.4
WOODRUFF NARROWS	57.3	14.0	7.0	25.2
WOODRUFF CREEK	4.0	1.7	1.2	---

BEAR RIVER BASIN
Watershed Snowpack Analysis - February 1, 2005

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
BEAR RIVER, UPPER (abv Ha	6	139	120
BEAR RIVER, LOWER (blw Ha	8	105	103
LOGAN RIVER	4	117	113
RAFT RIVER	1	82	85
BEAR RIVER BASIN	14	116	110

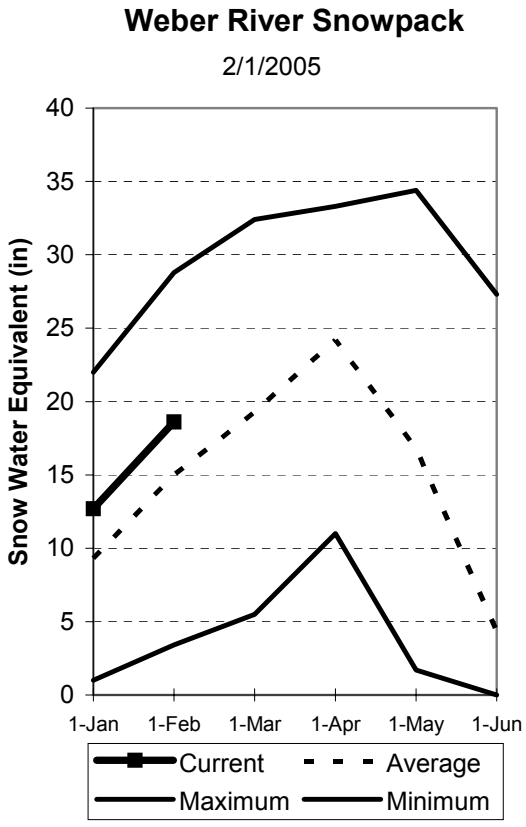
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

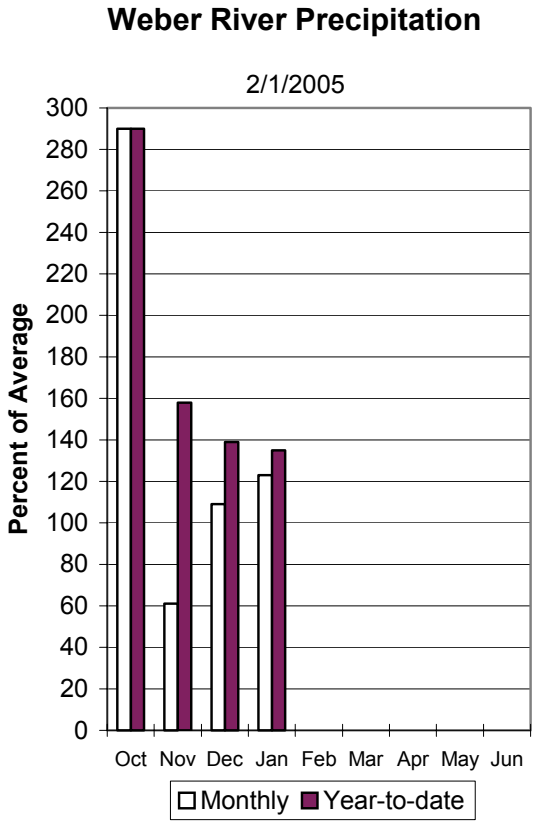
The average is computed for the 1971-2000 base period.

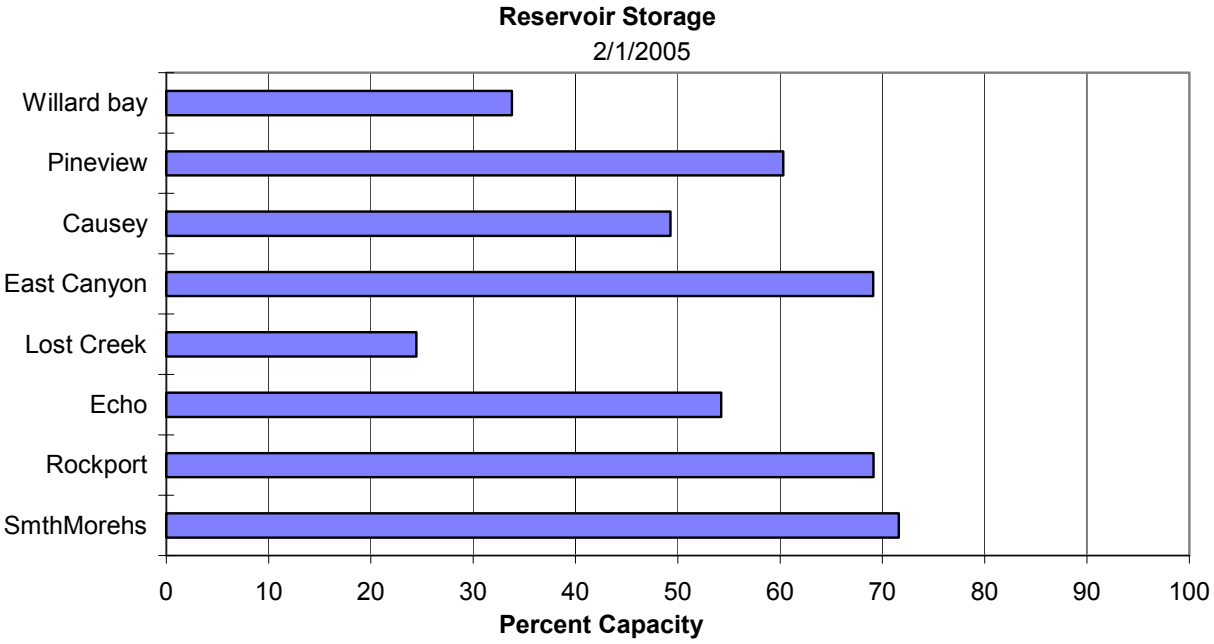
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Weber and Ogden River Basins
Feb 1, 2005

Snowpack on the Weber and Ogden Watersheds is above normal at 127% of average, about 120% of last year and down 9% from last month. Individual sites range from 70% to 157% of average. January precipitation was above average at 123% bringing the seasonal accumulation (Oct-Jan) to 135% of average. Soil moisture levels in runoff producing areas are at 69% of saturation in the upper 2 feet of soil compared to 30% last year and up 3% from last month. Streamflow forecasts range from 97% to 127% of average. Reservoir storage is at 49% of capacity, about 17% more than last year. The Surface Water Supply Index is at 49% for the Weber River and at 59% for the Ogden River. Overall water supply conditions are near normal and improving..







WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - February 1, 2005

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Smith & Morehouse Res inflow	APR-JUL	33	38	42	124	46	51	34
Weber River nr Oakley	APR-JUL	113	132	145	118	158	177	123
Rockport Reservoir inflow	APR-JUL	118	143	160	119	177	200	134
Weber River nr Coalville	APR-JUL	121	147	165	120	183	208	137
Chalk Creek at Coalville	APR-JUL	34	45	53	118	61	72	45
Echo Reservoir inflow	APR-JUL	152	185	210	117	235	270	179
Lost Creek Reservoir inflow	APR-JUL	8.9	13.4	17.0	97	21	28	17.6
East Canyon Reservoir inflow	APR-JUL	22	28	32	103	37	45	31
Weber River at Gateway	APR-JUL	280	350	395	111	440	510	355
SF Ogden River nr Huntsville	APR-JUL	43	58	68	106	78	93	64
Pineview Reservoir inflow	APR-JUL	90	120	140	105	160	190	133
Wheeler Creek nr Huntsville	APR-JUL	5.30	6.90	8.00	127	9.10	10.70	6.30

WEBER & OGDEN WATERSHEDS in Utah
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CAUSEY	7.1	3.5	2.3	2.8
EAST CANYON	49.5	34.2	24.9	35.4
ECHO	73.9	40.1	38.2	50.2
LOST CREEK	22.5	5.5	1.5	14.0
PINEVIEW	110.1	66.4	30.0	51.7
ROCKPORT	60.9	42.1	27.7	34.3
WILLARD BAY	215.0	72.6	47.1	151.6

WEBER & OGDEN WATERSHEDS in Utah
Watershed Snowpack Analysis - February 1, 2005

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
OGDEN RIVER	4	99	107
WEBER RIVER	9	115	135
WEBER & OGDEN WATERSHEDS	13	110	125

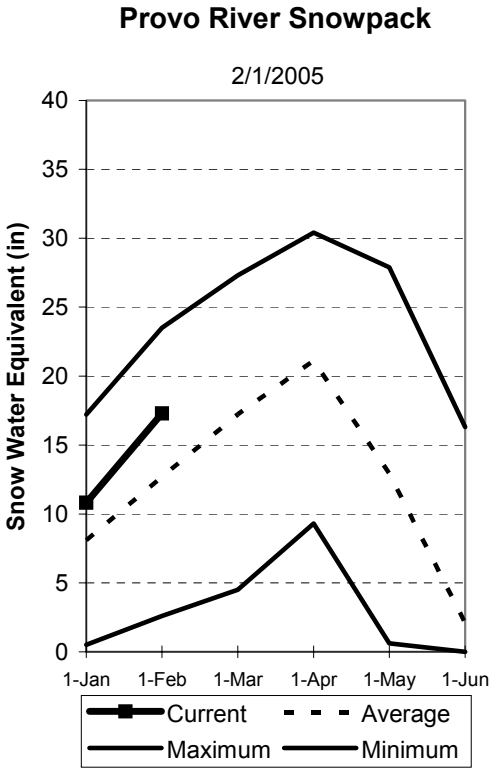
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

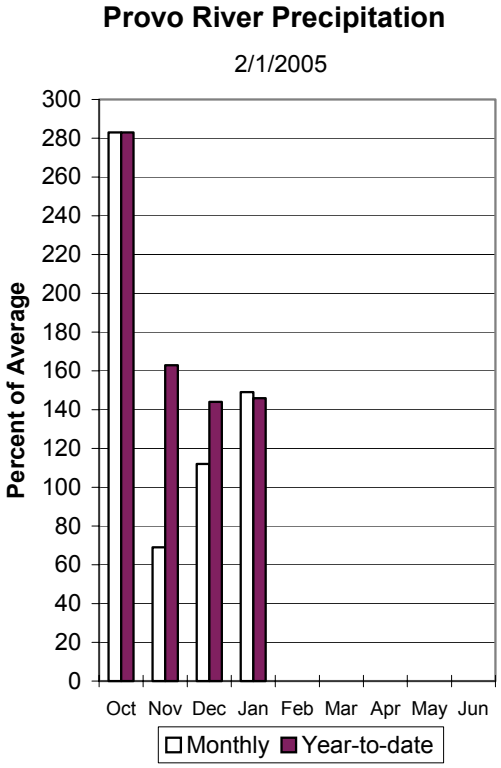
The average is computed for the 1971-2000 base period.

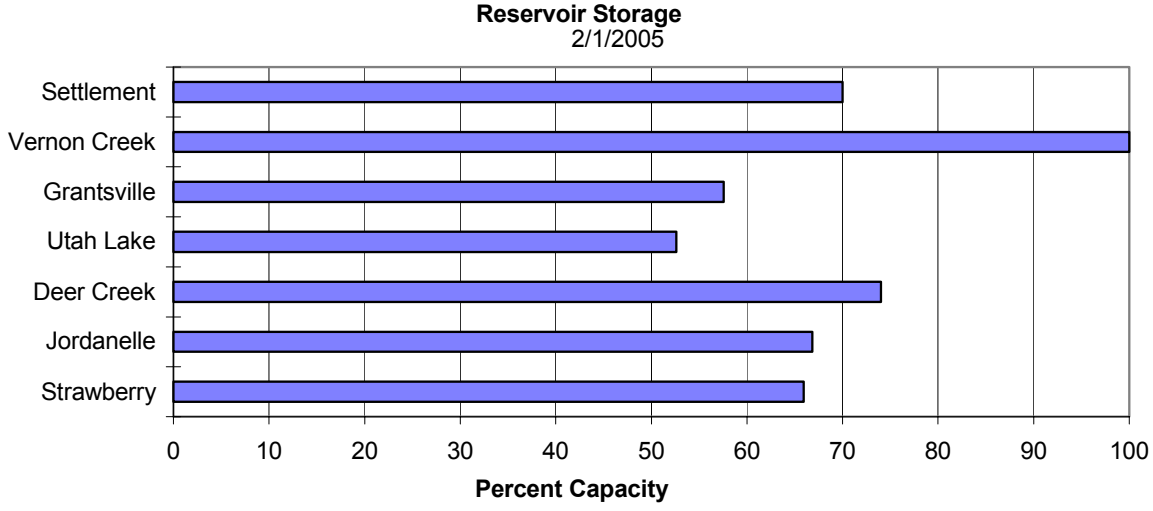
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Utah Lake, Jordan River & Tooele Valley Basins
Feb 1, 2005

Snowpacks over these watersheds are at 141% of average, 129% of last year and up 7% from last month. Individual sites range from 69% to 206% of average. January precipitation was much above average at 149%, bringing the seasonal accumulation (Oct-Jan) to 146% of average. Soil moisture levels in runoff producing areas are at 75% of saturation in the upper 2 feet of soil compared to 38% last year and up 4% from last month. Forecast streamflows range from 81% to 167% of average. Reservoir storage is at 62% of capacity, 1% less than last year. The Surface Water Supply Index is at 33%, or 67% of years would have more total water available. General water supply conditions are slightly below normal due to low reservoir storage, but otherwise improving.







UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - February 1, 2005

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Spanish Fork River nr Castilla	APR-JUL	22	48	72	94	96	122	77
Provo River nr Woodland	APR-JUL	87	107	120	117	133	153	103
Provo River nr Hailstone	APR-JUL	88	114	130	119	146	172	109
Provo R blw Deer Creek Dam	APR-JUL	86	124	150	119	176	215	126
American Fk R nr American Fk	APR-JUL	37	44	48	150	52	59	32
Utah Lake inflow	APR-JUL	225	324	395	122	466	565	325
Little Cottonwood Ck nr SLC	APR-JUL	40	46	50	125	54	61	40
Big Cottonwood Ck nr SLC	APR-JUL	39	47	51	134	55	63	38
Mill Creek nr SLC	APR-JUL	4.01	5.79	7.00	100	8.21	10.00	7.00
Parley's Creek nr SLC	APR-JUL	8.5	13.7	17.5	105	21	27	16.7
Dell Fork nr SLC	APR-JUL	3.10	5.58	7.20	106	8.82	11.30	6.80
Emigration Creek nr SLC	APR-JUL	0.36	2.29	3.70	82	5.11	7.00	4.50
City Creek nr SLC	APR-JUL	2.78	5.29	7.00	81	8.71	11.20	8.70
Vernon Creek nr Vernon	APR-JUL	0.77	1.10	1.40	95	1.78	2.54	1.48
Settlement Creek nr Tooele	APR-JUL	1.21	1.65	2.00	102	2.40	3.08	1.97
South Willow Creek nr Grantsville	APR-JUL	3.80	4.80	5.40	167	6.00	7.00	3.23

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DEER CREEK	149.7	110.8	57.8	104.8
GRANTSVILLE	3.3	1.9	0.9	1.8
SETTLEMENT CREEK	1.0	0.7	0.8	0.6
STRAWBERRY-ENLARGED	1105.9	729.1	777.7	642.2
UTAH LAKE	870.9	458.0	424.1	790.9
VERNON CREEK	0.6	0.6	0.4	---

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Watershed Snowpack Analysis - February 1, 2005

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
PROVO RIVER & UTAH LAKE	7	130	131
PROVO RIVER	4	137	142
JORDAN RIVER & GREAT SALT	6	115	140
TOOELE VALLEY WATERSHEDS	3	127	142
UTAH LAKE, JORDAN RIVER &	16	122	136

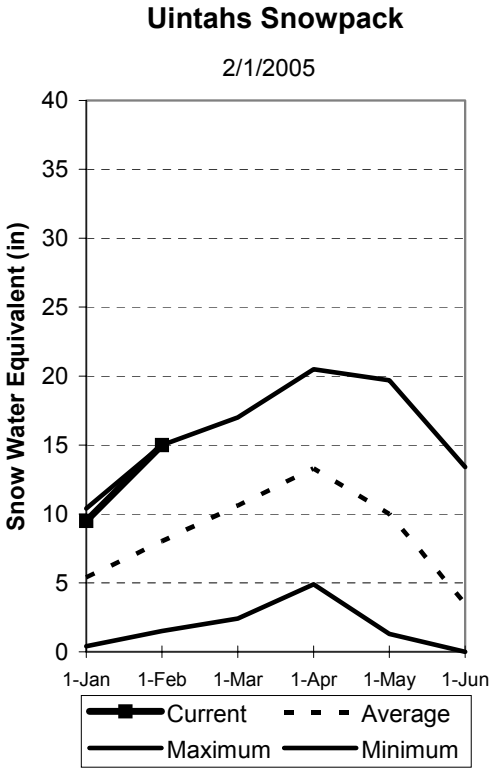
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

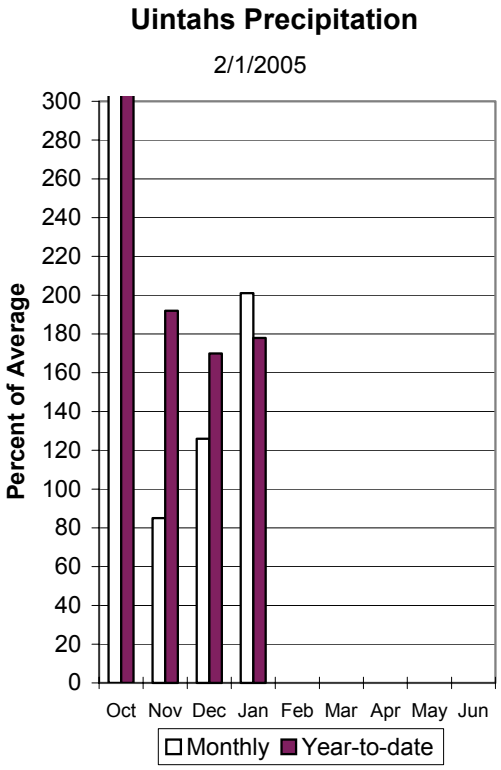
The average is computed for the 1971-2000 base period.

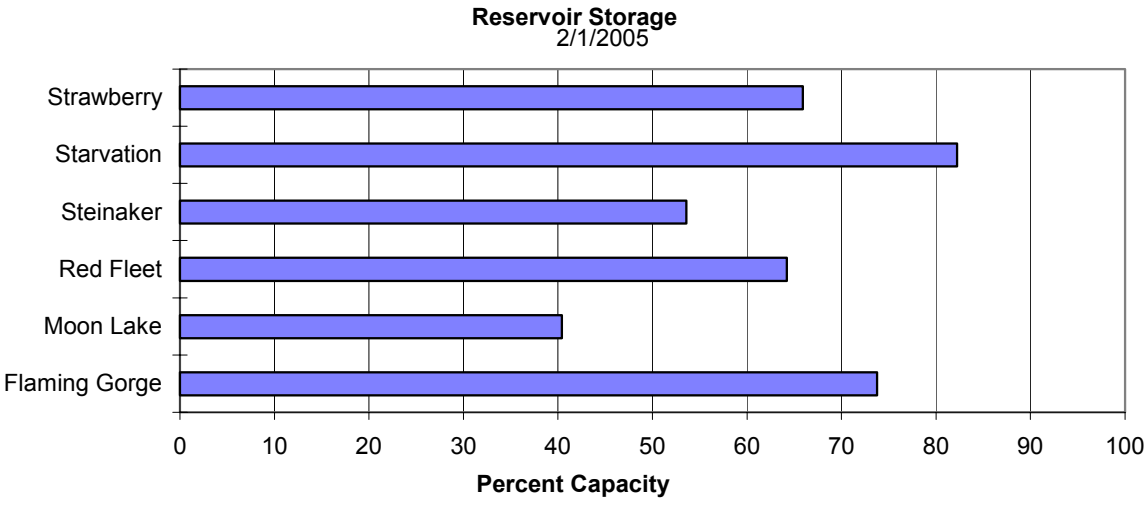
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Uintah Basin and Dagget SCD's
Feb 1, 2005

Snowpacks across the Uintah Basin and North Slope areas are much above average and above record levels at 192%, which is 195% of last year. The North Slope ranges from 94% to 350% and the Uintah Basin ranges from 118% to 271% of average. Precipitation during January was much above average at 201% bringing the seasonal accumulation (Oct-Jan) to 178% of average. Soil moisture values in runoff producing areas are at 58% of saturation in the upper 2 feet of soil compared to 30% last year and up 3% from last month. Reservoir storage is at 68% of capacity, 2% less than last year. The Surface Water Supply Index for the western area is 74% and for the eastern area it is 78% indicating above normal conditions basin wide. Streamflow forecasts range between 100% and 197% of average. Springtime runoff conditions are above normal. There is a 99.9% probability of getting at least average snowpack by April 1 (especially since they are already above average April 1) and a high probability of snowpacks greater than 140% of normal. Preparation for high flows should be considered.







UINTAH BASIN & DAGGET SCD'S
Streamflow Forecasts - February 1, 2005

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Blacks Fork nr Robertson	APR-JUL	65	83	95	100	107	125	95
EF of Smiths Fork nr Robertson	APR-JUL	23	28	31	100	35	42	31
Flaming Gorge Reservoir Inflow	APR-JUL	785	1000	1150	97	1295	1515	1190
BIG BRUSH CK abv Red Fleet Resv	APR-JUL	23	27	30	143	33	37	21
Ashley Creek nr Vernal	APR-JUL	57	74	85	164	96	113	52
WF DUCHESNE RIVER nr Hanna	APR-JUL	19.6	26	30	125	35	43	24
DUCHESNE R nr Tabiona	APR-JUL	103	119	130	124	141	157	105
UPPER STILLWATER RESV inflow	APR-JUL	99	114	125	152	136	151	82
ROCK CK nr Mountain Home	APR-JUL	112	126	135	152	144	158	89
DUCHESNE R abv Knight Diversion	APR-JUL	215	250	275	146	300	335	188
STRAWBERRY RES nr Soldier Springs	APR-JUL	46	63	75	127	89	111	59
CURRANT CREEK RESV Inflow	APR-JUL	25	29	32	128	35	39	25
STARVATION RESERVOIR inflow	APR-JUL	98	129	150	124	171	201	121
Lake Fork River abv Moon Lake	APR-JUL	84	96	105	154	114	126	68
Yellowstone River nr Altonah	APR-JUL	72	88	98	158	108	124	62
DUCHESNE R at Myton	APR-JUL	350	420	470	181	520	590	260
Whiterocks River nr Whiterocks	APR-JUL	72	92	105	188	118	138	56
DUCHESNE R nr Randlett	APR-JUL	390	540	640	197	740	890	325

UINTAH BASIN & DAGGET SCD'S
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
FLAMING GORGE	3749.0	2765.0	2601.0	2966.0
MOON LAKE	49.5	20.0	15.2	27.9
RED FLEET	25.7	16.5	13.5	18.0
STEINAKER	33.4	17.9	11.8	21.6
STARVATION	165.3	135.9	132.3	132.3
STRAWBERRY-ENLARGED	1105.9	729.1	777.7	642.2

UINTAH BASIN & DAGGET SCD'S
Watershed Snowpack Analysis - February 1, 2005

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
UPPER GREEN RIVER in UTAH	6	189	170
ASHLEY CREEK	2	244	277
BLACK'S FORK RIVER	2	138	106
SHEEP CREEK	1	203	139
DUCHESNE RIVER	11	192	195
LAKE FORK-YELLOWSTONE CRE	4	209	202
STRAWBERRY RIVER	4	145	152
UINTAH-WHITEROCKS RIVERS	2	267	286
UINTAH BASIN & DAGGET SCD	17	191	188

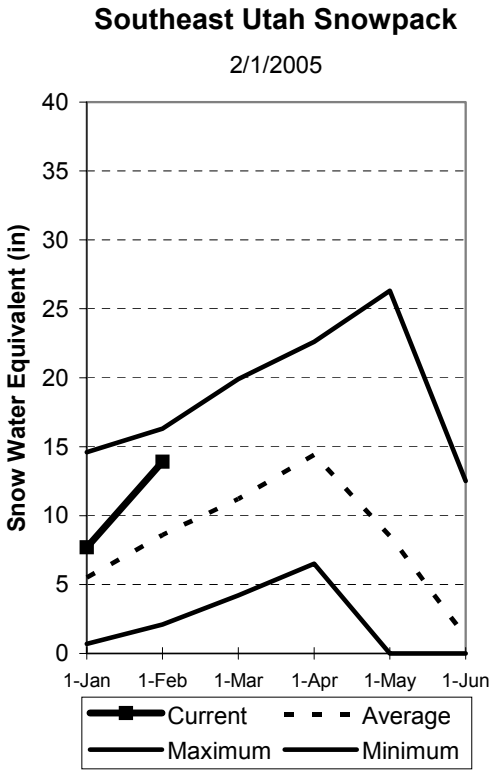
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

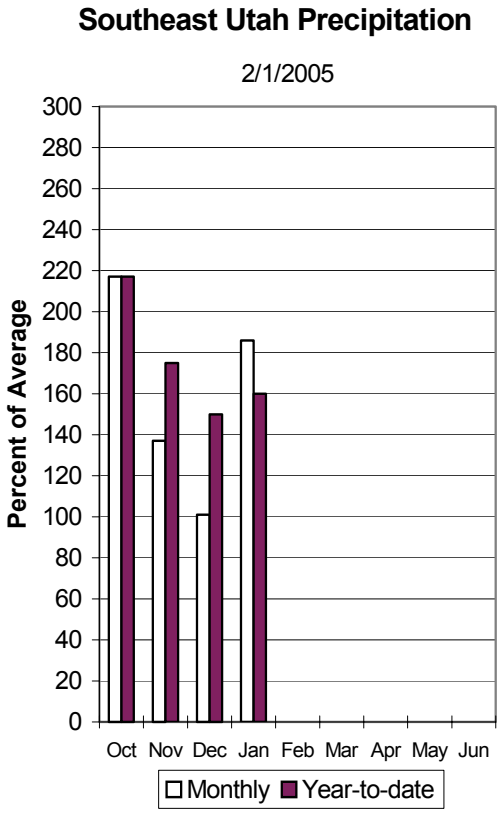
The average is computed for the 1971-2000 base period.

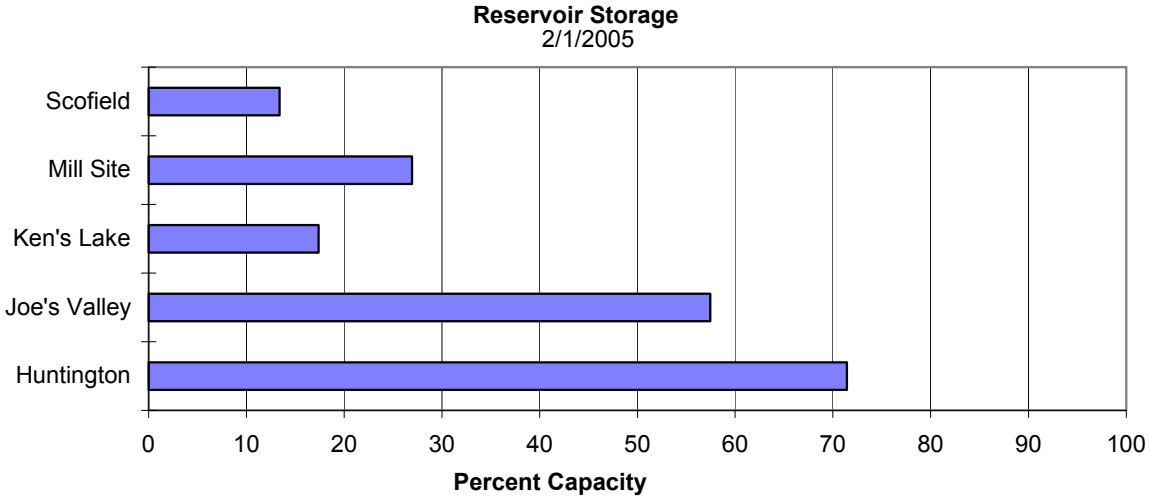
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Carbon, Emery, Wayne, Grand and San Juan Co.
Feb 1, 2005

Snowpacks in this region are much above normal at 159% of average, about 170% of last year and up 19% from last month. Individual sites range from 97% to 377% of average. Precipitation during January was much above average at 186%, bringing the seasonal accumulation (Oct-Jan) to 160% of normal. Soil moisture estimates in runoff producing areas are at 61% of saturation in the upper 2 feet of soil compared to 30% last year and up 1% from last month. Forecast streamflows range from 96% to 121% of average. Reservoir storage is at 35% of capacity, down 2% from last year. Surface Water Supply Indices for the area are: Price 31%, (below normal) San Rafael area 56% (near average) and Moab 58% (near average). General runoff and water supply conditions are below to near normal.







CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Streamflow Forecasts - February 1, 2005

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Gooseberry Creek nr Scofield	APR-JUL	8.4	11.5	13.5	113	15.5	18.6	11.9
Scofield Reservoir inflow	APR-JUL	36	44	50	109	56	64	46
White River blw Tabbyune Creek	APR-JUL	10.5	15.8	20	115	25	33	17.4
Green River at Green River, UT	APR-JUL	2140	2830	3300	104	3770	4460	3170
Electric Lake inflow	APR-JUL	8.5	12.6	16.0	102	20	27	15.7
HUNTINGTON CK nr Huntington	APR-JUL	31	41	48	96	55	65	50
JOE'S VALLEY RESV Inflow	APR-JUL	35	50	60	103	70	85	58
Ferron Creek nr Ferron	APR-JUL	28	36	42	108	49	59	39
Colorado River nr Cisco	APR-JUL	3140	4130	4800	103	5470	6460	4650
Mill Creek at Sheley Tunnel nr Moab	APR-JUL	3.30	5.20	6.50	130	7.80	9.70	5.00
Seven Mile Creek nr Fish Lake	APR-JUL	4.00	6.70	8.50	121	10.30	13.00	7.00
Muddy Creek nr Emery	APR-JUL	9.7	16.4	21	106	26	32	19.9
North Ck ab R.S. nr Monticello	MAR-JUL	0.18	1.20	2.40	247	4.01	7.14	0.97
South Ck ab Lloyd's Res nr Monticell	MAR-JUL	1.87	2.73	3.40	248	4.15	5.39	1.37
Recapture Ck bl Johnson Ck nr Blandi	MAR-JUL	8.90	11.40	13.00	257	15.00	17.00	5.05
San Juan River nr Bluff	APR-JUL	1430	1710	1900	155	2090	2370	1230

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNTINGTON NORTH	4.2	3.0	3.6	2.8
JOE'S VALLEY	61.6	35.4	32.4	41.2
KEN'S LAKE	2.3	0.4	0.6	1.1
MILL SITE	16.7	4.5	6.2	78.8
SCOFIELD	65.8	8.8	13.0	33.8

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Watershed Snowpack Analysis - February 1, 2005

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
PRICE RIVER	3	146	132
SAN RAFAEL RIVER	3	125	115
MUDDY CREEK	1	147	150
FREMONT RIVER	3	310	245
LASAL MOUNTAINS	1	119	122
BLUE MOUNTAINS	1	235	271
WILLOW CREEK	1	192	208
CARBON, EMERY, WAYNE, GRA	13	172	161

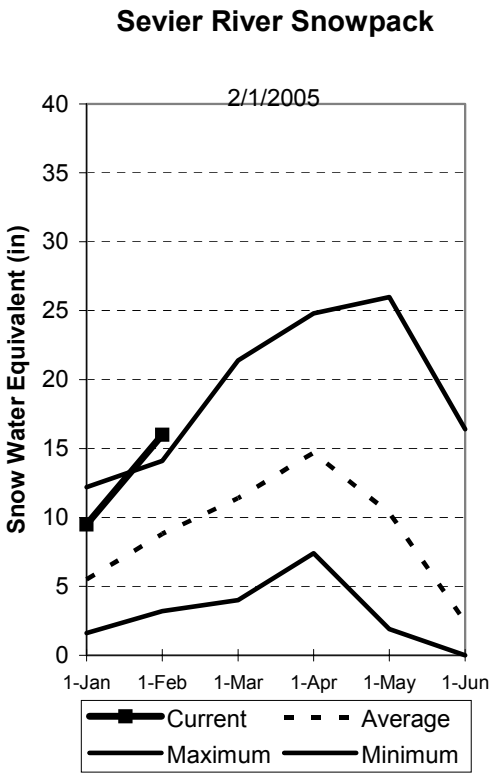
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

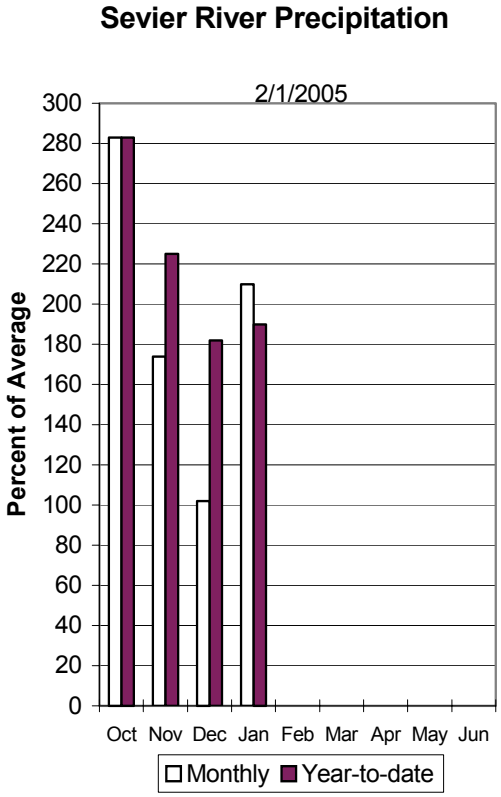
The average is computed for the 1971-2000 base period.

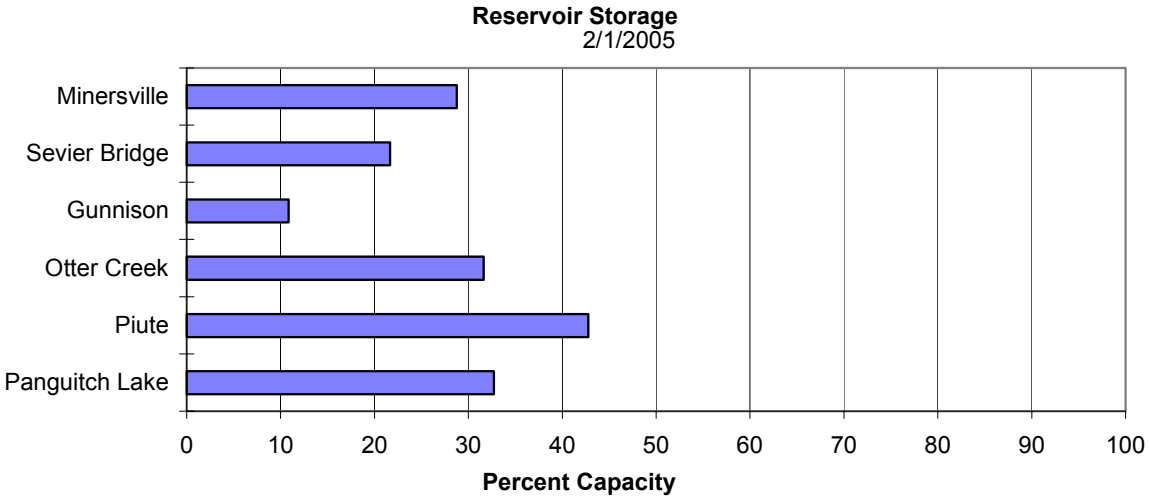
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Sevier and Beaver River Basins
Feb 1, 2005

Snowpacks on the Sevier River Basin are much above normal at 183% of average, about 189% of last year an up 11% from last month. The lower Sevier area is near average at 107%. Individual sites range from 79% to 377% of average. Precipitation during January was much above average at 210% of normal, bringing the seasonal accumulation (Oct-Jan) to 190% of average. Soil moisture estimates in runoff producing areas are at 66% of saturation (Sevier) in the upper 2 feet of soil compared to 31% last year an up 4% from last month. Streamflow forecasts range from 107% to 255% of average. Reservoir storage is at 27% of capacity, 6% more than last year. Surface Water Supply Indices are: Upper Sevier 94%, Lower Sevier 85% and Beaver 74%. Water supply conditions are above average due to high snowpack and soil moisture. The Sevier has a 97% probability of at least average snowpacks on April 1 and significant probability of 140% or more. On the upper Sevier, preparation for high flows is appropriate.







SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - February 1, 2005

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Sevier River at Hatch	APR-JUL	111	130	140	255	150	169	55
Sevier River nr Kingston	APR-JUL	166	191	205	230	219	245	89
EF Sevier R nr Kingston	APR-JUL	58	73	83	218	93	108	38
Sevier R blw Piute Dam	APR-JUL	200	239	265	210	291	330	126
Clear Creek nr Sevier	APR-JUL	22	30	35	159	40	48	22
Salina Creek at Salina	APR-JUL			MUCH ABOVE AVERAGE				19.7
Sevier R nr Gunnison	APR-JUL	255	396	470	168	544	685	280
Chicken Creek nr Levan	APR-JUL	1.92	3.43	4.80	107	6.50	9.66	4.50
Oak Creek nr Oak City	APR-JUL	1.08	1.55	1.92	116	2.32	3.00	1.66
Beaver River nr Beaver	APR-JUL	28	35	40	148	46	55	27
Minersville Reservoir inflow	APR-JUL	11.6	18.4	24	145	30	41	16.6

SEVIER & BEAVER RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
GUNNISON	20.3	2.2	1.2	13.1
MINERSVILLE (RkyFd)	23.3	6.7	4.6	14.4
OTTER CREEK	52.5	16.6	16.5	36.5
PIUTE	71.8	30.7	25.0	49.5
SEVIER BRIDGE	236.0	51.1	37.2	159.6
PANGUITCH LAKE	22.3	7.3	3.8	131.4

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - February 1, 2005

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER SEVIER RIVER (south	8	274	268
EAST FORK SEVIER RIVER	3	294	279
SOUTH FORK SEVIER RIVER	5	261	262
LOWER SEVIER RIVER (inclu	6	115	107
BEAVER RIVER	2	152	150
SEVIER & BEAVER RIVER BAS	16	194	183

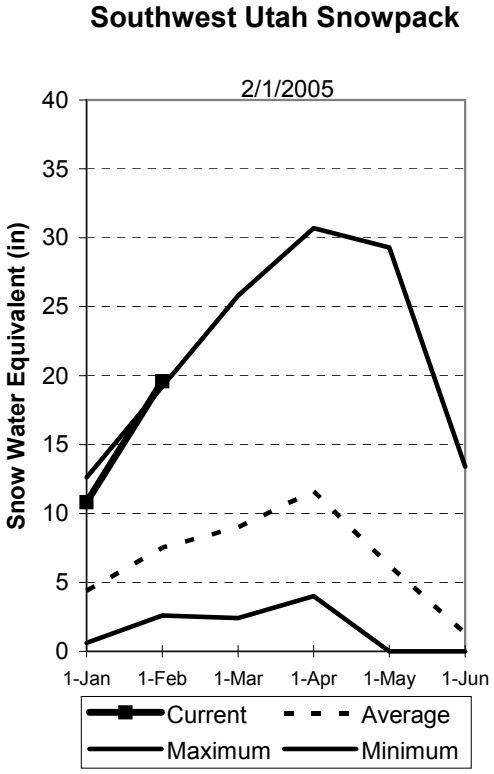
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

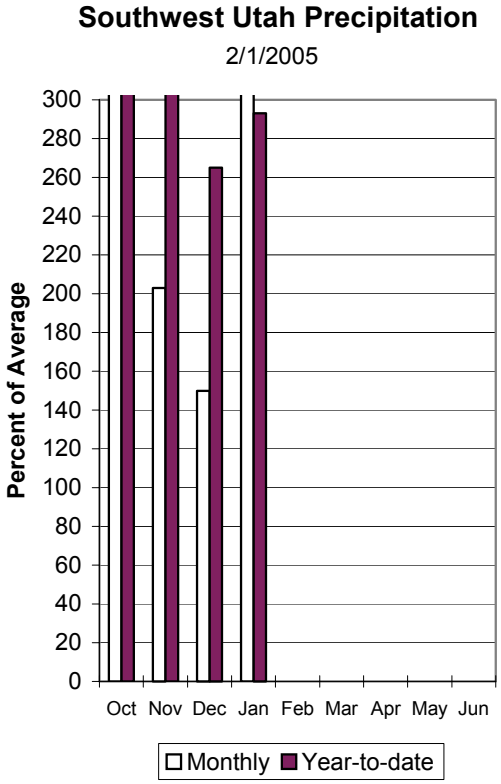
The average is computed for the 1971-2000 base period.

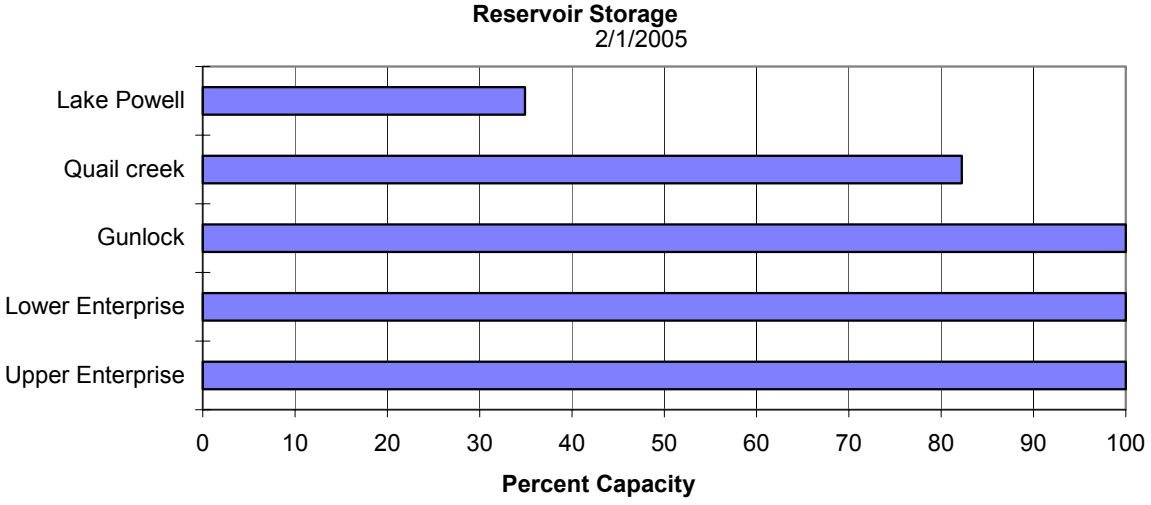
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

E. Garfield, Kane, Washington, & Iron co.
Feb 1, 2005

Snowpacks in this region are much above normal at 247% of average, about 316% of last year and up 1% from last month. Individual sites range from 35% to 377% of average. Precipitation was much above normal during January at 361% of average, bringing the seasonal accumulation (Oct-Jan) to 293% of normal. Soil moisture estimates in runoff producing areas are at 76% of saturation in the upper 2 feet of soil compared to 30% last year and up 6% from last month. Forecast streamflows range from 255% to 290% of average. Reservoir storage is at 89% of capacity, 47% more than last year. The Surface Water Supply Index is at 95%, indicating much above normal water availability. January has heightened concerns over the potential for high flows this spring, some of which have already occurred. This area has a 99.9% probability of at least average snowpacks on April 1 (especially since they are well above average April 1 values already) and significant potential of snowpacks of 150% or greater.







E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Streamflow Forecasts - February 1, 2005

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Lake Powell inflow	APR-JUL	5920	7760	9000	114	10240	12080	7930
Virgin River nr Virgin	APR-JUL	111	135	152	238	171	200	64
Virgin River nr Hurricane	APR-JUL	170	184	193	280	200	215	69
Santa Clara River nr Pine Valley	APR-JUL	7.91	11.33	14.00	255	16.96	21.82	5.50
Coal Creek nr Cedar City	APR-JUL	41	50	56	290	63	73	19.3

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
GUNLOCK	10.4	10.4	4.1	5.7
LAKE POWELL	24322.0	8492.0	11010.0	---
QUAIL CREEK	40.0	32.9	21.4	26.5
UPPER ENTERPRISE	10.0	10.0	0.0	---
LOWER ENTERPRISE	2.6	2.6	0.4	38.0

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Watershed Snowpack Analysis - February 1, 2005

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
VIRGIN RIVER	5	322	288
PAROWAN	2	330	325
ENTERPRISE TO NEW HARMONY	2	229	105
COAL CREEK	2	341	297
ESCALANTE RIVER	2	384	297
E. GARFIELD, KANE, WASHIN	9	329	261

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

UTAH SURFACE WATER SUPPLY INDEX

Snow Surveys Basin or Region Feb, 2005	NRCS SWSI/%	USDA Percentile	Years with Similar SWSI
Bear River	-3.8	4%	04,03,93
Ogden River	0.7	59%	96,95,79,73
Weber River	-0.1	49%	70,68,96,98
Provo	-1.4	33%	65,89,58,01
West Uintah Basin	2.0	74%	76,86,01,00
East Uintah Basin	2.3	78%	84,01,95,98
Price River	-1.6	31%	89,98,62,93
San Rafael	0.5	56%	00,74,82,98
Moab	0.6	58%	94,97,92,98
Upper Sevier River	3.7	94%	80,73,95,83
Lower Sevier River	2.9	85%	99,73,80,86
Beaver River	2.0	74%	68,97,82,84
Virgin River	3.8	95%	88,98,95,93

Snow Surveys

245 N Jimmy Doolittle Rd
Salt Lake City, UT
(801) 524-5213

SWSI Scale: -4 to 4
Percentile: 0 - 100%

What is a Surface Water Supply Index?

The Surface Water Supply Index (SWSI) is a predictive indicator of total surface water availability within a watershed for the spring and summer water use seasons. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow which are based on current snowpack and other hydrologic variables. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) with a value of zero (0) indicating media water supply as compared to historical analysis. SWSI's are calculated in this fashion to be consistent with other hydroclimatic indicators such as the Palmer Drought Index and the Precipitation index.

Utah Snow Surveys has also chosen to display the SWSI as a PERCENT CHANCE OF NON-EXCEEDANCE. While this is a very cumbersome name, it has the simplest application. It can be best thought of as a simple scale of 1 to 99 with 1 being the drought of record (driest possible conditions) and 99 being the flood of record (wettest possible conditions) and a value of 50 representing average conditions. This rating scale is a percentile rating as well, for example a SWSI of 75% means that this years water supply is greater than 75% of all historical events and that only 25% of the time has it been exceeded. Conversely a SWSI of 10% means that 90% of historical events have been greater than this one and that only 10% have had less total water supply. This scale is far more intuitive for most people and is totally comparable between basins: a SWSI of 50% means the same relative ranking on watershed A as it does on watershed B, which may not be strictly true of the +4 to -4 scale.

For more information on the SWSI go to: www.ut.nrcs.usda.gov/snow/ on the water supply page. The entire period of historical record for reservoir storage and streamflow is available.

DATA CURRENT AS OF:02/03/05 09:11:17

S N O W C O U R S E D A T A

FEBRUARY 2005

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
AGUA CANYON SNOTEL	8900	2/01	57	15.9	5.3	5.4
ALTA CENTRAL	8800	2/01	92	32.5	25.4	24.7
BEAVER DAMS SNOTEL	8000	2/01	24	5.7	5.5	7.0
BEAVER DIVIDE SNOTEL	8280	2/01	37	8.8	6.3	7.8
BEN LOMOND PK SNOTEL	8000	2/01	80	28.6	28.7	25.0
BEN LOMOND TR SNOTEL	6000	2/01	48	14.2	19.5	14.4
BEVAN'S CABIN	6450				-	-
BIG FLAT SNOTEL	10290	2/01	65	17.8	10.5	11.4
BIRCH CROSSING	8100				-	4.6
BLACK FLAT-U.M. CK S	9400	2/01	34	8.2	6.4	5.9
BLACK'S FORK GS-EF	9340				-	5.8
BLACK'S FORK JUNCTN	8930				-	5.9
BOX CREEK SNOTEL	9800	2/01	51	14.5	8.8	8.0
BRIAN HEAD	10000				-	11.8
BRIGHTON SNOTEL	8750	2/01	-	23.3	13.6	15.9
BRIGHTON CABIN	8700	2/01	86	28.5	18.7	17.5
BROWN DUCK SNOTEL	10600	2/01	83	25.4	10.4	11.1
BRYCE CANYON	8000				4.3	3.6
BUCK FLAT SNOTEL	9800	2/01	46	12.4	10.4	11.3
BUCK PASTURE	9700				-	-
BUCKBOARD FLAT	9000				9.2	-
BUG LAKE SNOTEL	7950	2/01	50	14.5	12.6	13.2
BURT'S-MILLER RANCH	7900				-	3.8
CAMP JACKSON SNOTEL	8600	2/01	69	24.4	10.4	9.0
CASCADE MOUNTAIN SNO	7770	2/01	42	13.5	13.8	-
CASTLE VALLEY SNOTEL	9580	2/01	69	21.1	8.0	7.7
CHALK CK #1 SNOTEL	9100	2/01	-	19.0	11.8	15.3
CHALK CK #2 SNOTEL	8200	2/01	40	12.3	7.7	9.9
CHALK CREEK #3	7500				-	5.6
CHEPETA SNOTEL	10300	2/01	75	24.8	7.7	8.3
CLAYTON SPRINGS SNTL	10000	2/01	67	17.9	6.2	-
CLEAR CK RIDG #1 SNT	9200	2/01	54	17.1	12.3	12.3
CLEAR CK RIDG #2 SNT	8000	2/01	39	10.1	9.2	9.4
CORRAL	8200				-	-
CURRANT CREEK SNOTEL	8000	2/01	39	9.9	8.1	6.8
DANIELS-STRAWBERRY S	8000	2/01	46	14.8	11.9	11.1
DILL'S CAMP SNOTEL	9200	2/01	45	12.6	8.6	8.4
DONKEY RESERVOIR SNO	9800	2/01	46	9.5	2.7	5.1
DRY BREAD POND SNTL	8350	2/01	51	13.3	13.6	14.5
DRY FORK SNOTEL	7160	2/01	27	7.0	10.6	10.1
EAST WILLOW CREEK SN	8250	2/01	43	10.2	5.3	4.9
FARMINGTON U. SNOTEL	8000	2/01	76	31.8	31.0	20.3
FARMINGTON LOWER SC	6950				-	16.2
FARMINGTON L. SNOTEL	6780	2/01	44	15.1	23.8	-
FARNSWORTH LK SNOTEL	9600	2/01	56	14.7	10.8	11.4
FISH LAKE	8700				-	5.1
FIVE POINTS LAKE SNO	10920	2/01	68	21.0	10.0	9.8
G.B.R.C. HEADQUARTER	8700				-	-
G.B.R.C. MEADOWS	10000				-	14.5
GARDEN CITY SUMMIT	7600				-	11.1
GARDNER PEAK SNOTEL	8350	2/01	58	15.9	-	-
GEORGE CREEK	8840				-	-
GOOSEBERRY R.S.	8400				-	7.5
GOOSEBERRY R.S. SNTL	7900	2/01	26	6.2	6.6	5.8
GUTZ PEAK SNOTEL	6820	2/01	40	20.2	-	-
HARDSCRABBLE SNOTEL	7250	2/01	43	14.3	16.9	10.9
HARRIS FLAT SNOTEL	7700	2/01	38	13.2	4.7	4.7
HAYDEN FORK SNOTEL	9100	2/01	47	13.0	7.5	9.8
HENRY'S FORK	10000				-	-
HEWINTA SNOTEL	9500	2/01	34	6.3	5.2	6.7
HICKERSON PARK SNTL	9100	2/01	27	6.1	3.0	4.4
HIDDEN SPRINGS	5500	1/27	4	1.2	7.4	5.5
HOBBLE CREEK SUMMIT	7420				-	9.6
HOLE-IN-ROCK SNOTEL	9150	2/01	29	5.3	3.9	4.1
HORSE RIDGE SNOTEL	8260	2/01	54	16.3	13.8	15.1
HUNTINGTON-HORSESHOE	9800				-	15.1
INDIAN CANYON SNOTEL	9100	2/01	53	16.9	7.1	6.9
JOHNSON VALLEY	8850				-	4.6

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
JONES CORRAL G.S.	9720				-	-
KILFOIL CREEK	7300				-	9.4
KILLYON CANYON	6300	1/28	10	2.9	11.1	11.5
KIMBERLY MINE SNOTEL	9300	2/01	48	12.3	9.7	9.4
KING'S CABIN SNOTEL	8730	2/01	43	14.7	8.1	6.8
KLONDIKE NARROWS	7400				-	12.7
KOLOB SNOTEL	9250	2/01	108	36.3	10.2	12.1
LAKEFORK #1 SNOTEL	10100	2/01	63	17.6	7.2	7.9
LAKEFORK BASIN SNTL	10900	2/01	68	18.0	11.7	11.7
LAKEFORK MOUNTAIN #3	8400				-	4.6
LAMBS CANYON	7400	1/28	42	12.5	13.2	11.2
LASAL MOUNTAIN LOWER	8800	1/27	30	6.8	-	5.9
LASAL MOUNTAIN SNTL	9850	2/01	35	9.5	8.0	7.8
LIGHTNING RIDGE SNTL	8220				-	-
LILY LAKE SNOTEL	9050	2/01	44	10.6	6.5	8.2
LITTLE BEAR LOWER	6000				-	7.1
LITTLE BEAR SNOTEL	6550	2/01	30	10.1	9.8	9.1
LITTLE GRASSY SNOTEL	6100	2/01	-	1.7	0.8	4.9
LONG FLAT SNOTEL	8000	2/01	-	9.3	4.0	5.6
LONG VALLEY JCT. SNT	7500	2/01	26	9.4	4.6	4.4
LOOKOUT PEAK SNOTEL	8200	2/01	63	20.4	22.1	15.4
LOST CREEK RESERVOIR	6130				-	3.8
LOUIS MEADOW SNOTEL	6700	2/01	36	11.3	17.1	-
MAMMOTH-COTTONWD SNT	8800	2/01	41	13.8	10.6	12.9
MERCHANT VALLEY SNTL	8750	2/01	43	11.6	8.9	8.2
MIDDLE CANYON	7000				-	9.1
MIDWAY VALLEY SNOTEL	9800	2/01	124	49.1	13.3	13.9
MILL CREEK	6950	1/28	39	11.7	15.7	12.5
MILL-D NORTH SNOTEL	8960	2/01	61	22.1	17.1	15.8
MILL-D SOUTH FORK	7400	2/01	43	13.4	14.9	13.0
MINING FORK SNOTEL	8000	2/01	47	17.5	12.8	9.3
MONTE CRISTO SNOTEL	8960	2/01	65	21.0	16.0	18.2
MOSBY MTN. SNOTEL	9500	2/01	65	19.0	8.7	7.0
MT.BALDY R.S.	9500				-	14.9
MUD CREEK #2	8600				-	8.6
OAK CREEK	7760				-	-
PANGUITCH LAKE R.S.	8200				-	-
PARLEY'S CANYON SNTL	7500	2/01	35	10.2	11.5	11.6
PARRISH CREEK SNOTEL	7740	2/01	49	15.9	21.3	-
PAYSON R.S. SNOTEL	8050	2/01	42	11.1	10.9	11.6
PICKLE KEG SNOTEL	9600	2/01	39	9.3	9.0	10.0
PINE CREEK SNOTEL	8800	2/01	-	14.7	13.7	12.9
RED PINE RIDGE SNTL	9200	2/01	44	11.3	8.8	10.5
REDDEN MINE LOWER	8500				-	10.8
REES'S FLAT	7300				-	8.7
ROCK CREEK SNOTEL	7900	2/01	-	10.1	5.5	5.6
ROCKY BN-SETTLEMT SN	8900	2/01	57	19.9	13.1	15.1
SEELEY CREEK SNOTEL	10000	2/01	42	11.4	8.8	8.8
SMITH MOREHOUSE SNTL	7600	2/01	39	11.3	6.2	9.2
SNOWBIRD SNOTEL	9700	2/01	110	41.2	26.3	20.1
SPIRIT LAKE	10300				-	7.4
SQUAW SPRINGS	9300				-	4.6
STEEL CREEK PARK SNO	10100	2/01	45	10.7	7.1	9.4
STILLWATER CAMP	8550				-	6.5
STRAWBERRY DIVIDE SN	8400	2/01	46	14.1	11.4	11.9
SUSC RANCH	8200				-	5.2
TALL POLES	8800				-	8.4
TEMPLE FORK SNOTEL	7410	2/01	50	13.7	10.8	-
THAYNES CANYON SNTL	9200	2/01	86	28.1	13.0	13.8
THISTLE FLAT	8500				-	-
TIMBERLINE	9100				-	-
TIMPANOGOS DIVIDE SN	8140	2/01	77	25.2	16.0	15.0
TONY GROVE LK SNOTEL	8400	2/01	76	27.9	23.8	23.4
TONY GROVE R.S.	6250				-	9.0
TRIAL LAKE	9960				-	14.7
TRIAL LAKE SNOTEL	9960	2/01	67	21.5	13.3	15.7
TROUT CREEK SNOTEL	9400	2/01	52	20.2	6.2	5.8
UPPER JOES VALLEY	8900				-	6.8
VERNON CREEK SNOTEL	7500	2/01	30	7.2	9.3	7.1
VIPONT	7670				-	-
WEBSTER FLAT SNOTEL	9200	2/01	65	21.4	7.4	9.8
WHITE RIVER #1 SNTL	8550	2/01	44	13.3	7.3	8.3
WHITE RIVER #3	7400				-	5.8
WIDTSOE #3 SNOTEL	9500	2/01	74	26.7	5.2	7.1
WRIGLEY CREEK	9000				-	6.7
YANKEE RESERVOIR	8700				-	5.6

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Utah Water Supply Outlook Report

Natural Resources Conservation Service
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